Please amend the above-identified application as follows:

In the Specification

Page 12, line 18: Please amend the paragraph beginning with "□ is an allocation configuration..." as follows:

- [[□]] ψ is an allocation configuration, if N objects are meant to be routed the allocation configuration [[□]] ψ is made up of N allocations ~~yi (□)~~ yi (ψ)

Page 12, line 23: Please amend the paragraph beginning with "Sx (Di, yi (□)..." as follows:

- ~~Sx (Di, yi (□)~~ Sx (Di, yi (ψ) is the distance between x and di exiting by router ~~Yi (□)~~ Yi (ψ)

Page 12, line 28: Please amend the paragraph beginning with "□ ε [0, 1] is..." as follows:

- ~~□ ε [0, 1]~~ η ε [0, 1] is the training ratio

Page 12, line 29: Please amend paragraph [0063] beginning with "□ ε [0. 1] is..." as follows:

- ~~□ ε [0. 1]~~ γ ε [0. 1] is the omit ratio

Page 13, line 4: Please amend paragraph beginning with "In particular..." as follows:

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In particular table Q_x of router x is initialized as follows:

$$\underline{Q_x^{t=0}(d,y) = 0 \; si \; S_x(d,y) = \min_{y,voi\ \sin\ de\ x}\left(S_x\left(d,y^1\right)\right)}$$

$$\cancel{Q_x^{t=0}(d,y) = 0 \; si \; S_x(d,y) = \min \left(S_x\left(d,y^1\right)\right)}$$

next to

$$Q_x^{t=0}(d,y) = 1$$

otherwise

Page 18, line 26: Please amend the paragraph beginning with "to select..." as follows:

- to select the best dynamic allocation configuration [[□]] $\underline{\tilde{\psi}}$:

$$\underline{\tilde{\psi} = \arg\min_{\psi} \sum_{i=1}^{n} \left(S_x\left(d_{i,} y_i(\psi)\right) + 2.Q_x\left(d_{i,} y_i(\psi)\right)\right)\_} \qquad \text{Eq. 1}$$

Page 19, line 1: Please amend the paragraph beginning with "to route..." to read as follows:

- to route the objects following the optimum configuration [[□]] $\underline{\tilde{\psi}}$, i.e., allocate to each object P_i the y_i output ~~(⊟)~~ $\underline{(\tilde{\psi})}$

Page 19, line 4: Please amend the paragraph beginning with "to send..." as follows:

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- to send as acknowledgement of receipt to the router of origin S_i the object P_i (S_i, d_i) ε Ptransit:

$$\underline{t_x(d_i) = Q_x(d_{1,}y_1(\tilde{\psi}))} \qquad \text{Eq. 2}$$

Page 19, line 8: Please amend the paragraph beginning with "where Yi..." as follows:

where ~~yi (⊟)~~ $\underline{y_i(\tilde{\psi})}$ designates the output actually by routing over the object P_i (S_i, d_i).

Page 19, line 10: Please amend the paragraph beginning with "Indeed, the..." as follows:

Indeed, the routing is done on the basis of the value ~~S_x (d_i, Y_i (⊟) + 2.Q_x (d_i, Y_i (⊟))~~ $\underline{S_x(d_i, Y_i(\tilde{\psi}) + 2.\tilde{Q}_x(d_i, Y_i(\tilde{\psi}))}$ in which ~~S_x (d_i, Y_i (⊟))~~ $\underline{S_x(d_i, Y_i(\tilde{\psi}))}$ represents the distance of the shortest path for the object I to go from x to its destination di by routing over the path ~~y_i (⊟)~~ $\underline{y_i(\tilde{\psi})}$. As ~~$Q_x$ (d_i, y_i (⊟))~~ $\underline{Q_x(d_i, y_i(\tilde{\psi}))}$ designates the number of deflections estimated on the most followed path to go from x to di via ~~y_i (⊟)~~ $\underline{y_i(\tilde{\psi})}$ during the last iterations the variable ~~S_x (d_i, y_i (⊟))~~ $\underline{S_x(d_i, y_i(\tilde{\psi}))}$represents the estimation of the number of routers which the object I will cross on its path exiting by ~~y_i ($\tilde{\psi}$)~~ $\underline{y_i(\tilde{\psi})}$. Since all the links are, hypothetically, of the same length this value is directly proportional to the transit time. As a consequence the routing is done by optimizing the transit time of the objects. This time is estimated dynamically with the help of an internal indicator (for example, the number of defections undergone).

Page 21, line 1: Please amend the first paragraph, beginning with "if y =..." as follows:

- if y = y_i, i.e., y is the exit corresponding to the router from where the acknowledgement of receipt comes then:

$$\underline{Q_x(d_{1,}y) := (1-\eta) . Q_x(d_{1,}y) + \eta(q_x(d_{1,}y) + t_y(d_1))} \qquad \text{Eq. 3}$$

Page 21, line 5: Please amend the paragraph beginning with "where qx..." as follows:

where q_x (d_i, y) = 1 if y does not belong to one of the shortest topological paths between x and d_i (deflection) and q_x(d_i, y) = 0 otherwise

Otherwise:

$$Q_x(d_{1,}y) := \gamma . Q_x(d_{1,}y) + (1-\gamma) . Q_x^{t=0}(d_{1,}y) \qquad \text{Eq. 4}$$

Page 21, line 9: Please amend paragraph [105] beginning with "the updating..." as follows:

The updating process of the values Q_x according to the "training" mode is as follows:

$$\underline{Q_x(d_{1,}y) := (1-\eta) . Q_x(d_{1,}y) + \eta . (q_x(d_{1,}y) + t_y(d_1))}$$

Page 21, line 25: Please amend the paragraph beginning with "tx (di)..." as follows:

- ~~t_x (d_i) = Q_x (d_i, y_i, (⊟)) and y_i (⊟)~~ $\underline{t_x (d_i) = Q_x (d_i, y_i, (\tilde{\psi}))}$ and $\underline{y_i (\tilde{\psi})}$ designates the output allocated to the object of by the allocation ~~⊟~~ $\underline{\tilde{\psi}}$.

Page 22, line 11: Please amend the paragraph beginning with "The use..." as follows:

The use of exit ~~y_i (⊟)~~ $\underline{y_i (\tilde{\psi})}$, an exit actually routed over by the object P_i (S_i, d_i) is of the highest importance. Indeed, it is thanks to this that the knowledge of the paths actually navigated by the objects could be spread through the network.

Page 22, line 16: Please amend the paragraph beginning with "The updating..." to read as follows:

The updating procedure according to the "detraining" mode consists, at each iteration, of systematically updating the Q table of values independently of the training due to the traffic by using the updating formula:

$$\underline{Q_x(d_{1,}y) := \gamma . Q_x(d_{1,}y) + (1-\gamma) . Q_x^{t=0}(d, y)}$$

Page 22, line 22: Please amend the paragraph beginning with "with □..." to read as follows:

with ~~□ ε [0, 1]~~ <u>γ ε [0, 1]</u>. In this formula detraining by the neglect factor is applied for each allocation of a Pi object in x going from di and being routed on the motor y_i by the routing procedure on the three neighboring routers for x different from y. The objective is to slowly come back to the initial values of the shortest path in the absence of traffic so as to improve the adaptation of the network during passage of a phase of heavy traffic to a phase of light traffic. The phenomenon of hysteresis is thus reduced and it is possible to carry out the routing of objects in non-stationary traffic.